

Elementary School Teachers Use of the iPad Across the Curriculum- Factors Influencing Utilization

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Introduction

The iPad is a tablet computer, which features a multi-touch screen allowing users to manipulate content such as, text, graphics, or media; and according to Apple, schools are using 1.5 million of them (Kessler, 2012). With 98% of public schools having access to the internet in 2008 (Snyder & Dillow, 2012), and as iPads become more available and accessible to schools, teachers need to examine how the iPad or other Tablet PCs fit into or potentially even change teachers' pedagogy. The growth in implementation of technology in the classroom leads to a discussion of the best practice involved and a responsibility to meet the growing needs of 21st century learners.

This study aims to describe how iPads are being used in elementary school classrooms and what factors, in terms of comfort level with technology and availability, influence the use of these devices. The following questions guide the research: What settings are elementary teachers using iPads? What types of apps are students using? How does the teacher's comfort level with technology influence the use of the iPad? Do the number of iPads available effect how they are being used?

Method

During the fall semester of 2012, evidence was gathered as to how elementary teachers are utilizing iPads in the classroom, and what factors influence iPad use. Data was collected through an online survey completed by elementary teachers in the New Prairie Community School Corporation, La Porte Community School Corporation, Plymouth Community School Corporation, East Allen County Schools, MSD Wabash County Schools, and in the School City of Hobart. Purposive sampling was used in order to survey only teachers who have access to an iPad or iPads in the classroom.

The survey consisted of ten questions which addressed factors influencing the use of the iPad in the classroom. Six open-ended questions asked teachers to describe their instructional practices with the iPads, popular applications used by themselves and the students, and teachers' comments on what else they would be interested in learning or doing with iPads. The remaining six questions aimed to answer how teachers are using the iPad in the classroom.



image retrieved from: http://www.wired.com/images_blogs/wiredscience/2012/01/ipad_students.jpg

Results and Discussion

Professional development activities

	Did not use, not available, or not helpful		Somewhat to very helpful	
	n	%	n	%
Consulting Colleagues	4	8.51	43	91.48
Searching Internet	11	23.4	36	76.59
Consulting Students	21	44.68	26	55.31
Attending Professional Development Sessions	26	55.31	21	44.68
Watching Video Tutorials	27	57.44	20	42.55
Reading Professional Magazines or Journals	32	68.08	15	31.91
Reading Blogs	33	71.73	13	28.26
Using Apple's Support	34	72.34	13	27.65

n=47 except Reading blogs n=46

The table above shows professional development activities that teachers participated in, ranked by how helpful they were perceived to be. Consulting colleagues and searching the Internet were the two most used activities, demonstrating the need for time in order for teachers to learn how to effectively implement iPad technology in their classroom. When asked if participants wanted more professional development on how to use iPads in their classroom, 85.1% reported "Yes", 8.5% reported "No", and 6.4% reported "I don't know".

As seen in the table to the right, which describes the types of function and apps that teachers are reportedly using in their classrooms, drill and practice types apps are the overwhelming majority. This could indicate that iPads are being used as a supplement to the curriculum, not as a driving force and not as a tool for students to engage in higher level thinking or collaboration. It could also mean there is less time to devote to other types of applications and functions or that teachers are most familiar with using the iPad as a tool to provide extra practice to students.

Teachers reported using iPads mostly in core subjects, Language Arts and Math. There was also a significant level of use for student free choice times, which would appear to indicate that the iPads may be being used as a "filler" activity or as an incentive to students.

Types of apps and functions used on iPads

	Used Not at All to Little	Used Somewhat to Very Often	n
	%	%	
Drill/Practice (i.e. math facts, sight words)	25.64	74.35	39
Viewing Internet Applications or Websites	53.65	46.31	41
E-books	65.78	34.21	38
Performing Research	69.23	30.76	39
Camera	71.05	29.94	38
Writing	81.08	18.91	37
Drawing	84.21	15.78	38
Graphic Organizers	86.48	13.51	37
Collaboration (with other students or with teacher)	86.84	13.15	38
Assistive Tech Features	86.84	13.15	38
Taking Notes	86.84	13.15	38
Viewing Video	89.74	10.52	38
Games (non-educational)	92.1	7.89	38
Listening to/Creating Music	92.1	7.89	38
Mapping/GPS	92.1	7.89	38

Not surprisingly, participants found exceptionally high levels of student engagement when students were using iPads, and those with only one iPad available desired more iPads so that they could be used more often and with more students.

iPads were used once to multiple times per day among 54.4% of participants, once to two-three times per week among 26.1% of participants, and less than once to two-three times per month for 19.5% of participants. iPads were reported being used for one-twenty minutes per sitting by 56.8% of participants. More research is needed to determine the impact of iPad use on student achievement.

Teachers also reported using collaboration features little to not at all in 86.84% of cases. Several things could be drawn from this, such as, teachers are unaware of how to use iPads for collaboration or they may not be teaching in a constructivist manner, and more research is needed to determine teachers' knowledge and use of collaborative applications and the pedagogical methodologies teachers are imploring in their classrooms.

"They [iPads] are great tools, but excellent instruction is still the key."
-Survey Participant